

S/081/62/000/007/033/033  
B168/B101

AUTHORS: Provorov, V. N., Zaytseva, V. D.  
TITLE: Luminescence analysis in the rubber industry  
PERIODICAL: Referativnyy zhurnal. Khimiya, no. 7, 1962, 659, abstract  
7P349 (Vestn. tekhn. i ekon. inform. N.-i. in-t tekhn.-ekon.  
issled. Gos. kom-ty Sov. Min. SSSR po khimii, no. 1, 1961,  
23-25)

TEXT: Apparatuses KFA-1 (KFA-1) and KFA-2 (KFA-2) devised by the authors for measuring the intensity of luminescence are described. The KFA-1 is intended for light rubbers, the KFA-2 for carbon-black rubbers. The intensity of luminescence of a crude-rubber mix decreases (in the case of the rubbers CKB-356p (SKB-35br) and CKC-30 (SKS-30)) with an increase in the carbon-black content. The intensity of luminescence of vulcanized natural rubbers likewise decreases with the vulcanization time; this characteristic makes it possible to determine the vulcanization optimum from the intensity of luminescence and to check the free sulfur content of vulcanized rubbers. [Abstracter's note: Complete translation.]

Card 1/1

38970

S/138/62/000/007/001/002  
A051/A126

The effect of the shape coefficient on ....

The loss of stability and an increase of sample flexibility of vitrified rubber begins at  $\phi/\sqrt{\sigma} = 0.045$ . Tests made on repeated shifting of rubber-metal samples under similar dynamic conditions as in compression, at various thicknesses  $L$ , height  $a$ , but the same width, revealed that in the highly-elastic state the shift modulus at a frequency of 10 col/min is equal to  $G_p = 9 \text{ kg/cm}^2$ . The compression modulus for the same rubber sample is  $E_p = 25 - 27 \text{ kg/cm}^2$ . These figures were found to agree with conclusions on the resilience theory for incompressible resilient material for which the shift modulus is three times less than the compression modulus. There are 5 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti, Problemnaya laboratoriya fiziki polimerov MGPI im. V.I. Lenina (Scientific Research Institute of the Rubber Industry, Laboratory for Problems of Polymer Physics MGPI im. V.I. Lenin)

Card 2/2

38970  
8/138/62/000/007/001/002  
A051/A126

15.9300

AUTHORS: Bartenev, G.M.; Zaytseva, V.D.

TITLE: The effect of the shape coefficient on deformation and frost-resistance of rubber

PERIODICAL: Kauchuk i rezina, no. 7, 1962, 16 - 18

TEXT: The authors experimentally investigated the effect of the shape coefficient on various deformations and frost-resistance. Tests were made on an Aleksandrov-Gayev frequency instrument designed at the NIIRP, for repeated compression on cylindrical samples having various shape coefficients. It has been previously established that with an increase of the bearing surface with respect to the free surface, the hardness of the sample under compression increases. Formulae are presented for various parameters. Attention is drawn to the fact that in repeated deformations the conditions of a transition from pure compression to a longitudinal shift differ from static conditions. It has been established that the shift to deformation of longitudinal flexure begins at a shape coefficient value of  $\phi \approx 0.06 - 0.07$ , at tension amplitudes of 2 - 3 kgc/cm<sup>2</sup>.

Card 1/2

KUZ'MINSKIY, A.S.; ZAYTSEVA, V.D.; LEZHNEV, N.N.

Protecting crude and vulcanized rubbers from catalytic oxidation  
under the effect of copper and iron ions. Kauch.i rez. 21  
no.4:10-14 Ap '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti i  
Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.  
(Rubber) (Oxidation)

HARTENEV, G.M.; ZAYTSEVA, V.D.

Effect of the shape coefficient on the deformation and frost resistance of rubber. Kauch. i rez. 21 no. 7:16-18 J1 '62. (MIRA 15:7)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti i problemnaya laboratoriya fiziki polimerov Moskovskogo gosudarstvennogo pedagogicheskogo instituta imeni Lenina.  
(Rubber Testing)

ZUYEV, Yu.S.; ZAYTSEVA, V.D.

Effect of waxlike substances on the ozone cracking of rubber  
tires. Kauch.i rez. 22 no.2:22-25 F '63. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.  
(Tires, Rubber--Testing)  
(Ozone)

PROVOROV, V.N.; ZAYTSEVA, V.D.; GAL'BRAYKH, I.Ye.; UR'YAN, R.S.

Photometric method for evaluating textile materials of  
colored rubbers. Kauch.i rez. 21 no.9:57-58 S '62.  
(MIRA 15:11)

1. Nauchno-issledovatel'skiy institut rezinovykh i  
lateksnykh izdeliy i zavod "Krasnyy treugol'nik."  
(Rubber--Testing)  
(Photometry)

The action of wax-like substances in ....

3/138/63/000/002/005/007  
A051/A126

rubbers is always less in the presence of wax. The less the quantity of the formed cracks and the later their formation, the faster the force drops in the sample and the sooner is the rubber destroyed. This is noted in the region of large deformations of the rubbers, in the presence of wax and that the more, the more wax is present. The comparison showed that in large deformations the wax, slowing down the formation of cracks on the rubbers, reduces their service life the more, the greater its dosage. In small deformations the protective action of the wax is connected with the formation of a solid film on the rubber surface, with the formation of single cracks, and with the wax migration on the sample surface. There are 2 figures and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

Card 2/2



S/138/63/000/002/005/007  
A051/A126

AUTHORS: Zuyev, Yu.S., Zaytseva, V.D.

TITLE: The action of wax-like substances in ozone cracking of rubber

PERIODICAL: Kauchuk i rezina, no. 2, 1963, 22 - 25

TEXT: Certain aspects with regard to the use of waxes and wax-like substances (mixtures of isomer, or related compounds, regardless of the chemical structure, having the consistency of wax) for the protection of rubber against ozone cracking are discussed. A quantitative comparison is made of the objective characteristics of destruction (the time prior to the appearance of maximum number of cracks,  $\tau_{n \max}$ ; time prior to the tear  $\tau_t$ , rate of force reduction  $dP/dt$  in the sample, and the number  $n$  of formed cracks). CHC-30 (SKS-30) rubber, non-filled and filled with 30 w.p. channel carbon black and containing 0.2 and 5 w.p. ceresin was studied using a hermetically-sealed chamber. Signals were passed through a three-channel amplifier ДМ-2 (DM-2) to an automatic ЭПП-09 М1 (EPP-09-M1) electronic potentiometer. The "Zenit" camera was used to film three samples simultaneously. The number of cracks, both in filled and non-filled

Card 1/2

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.; ZHEREBKOVA, L.S.; ZAYTSEVA, V.D.

Rupture life of rubbers in the presence of physically aggressive media. Vysokom.soed. 5 no.8:1201-1206 Ag '63. (MIRA 16:9)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.  
(Rubber--Testing)

WAXPHEMA, V.B.; PROVOZOV, V.N.

Automatic method for color determination of various materials in  
the rubber industry. Izv. Vses. nauch.-issled. inst. khim. i tekhn. (1963) 1:1-4.

(N. P. 1963)

1. Nauch.-issledovatel'skiy institut rezinovykh izdeliy.  
Izdelye.

ZAYTSEVA, V.D.; PROVOROV, V.N.

Use of the luminescence method in controlling certain processes  
of manufacturing latex products. Zhur. prikl. spekt. 3 no. 2:  
174-176 Ag '65. (MIRA 18:12)

1. Submitted Nov. 2, 1964.

ZAYTSEVA, V.D.; BARTENEV, G.M.

Effect of the ingredients on the frost resistance of rubbers subjected to repeated deformation. Vysokom. soed. 2 no.9:1301-1308 S '60.  
(MIRA 13:9)

1. Nauchno-issledovatel'skiy rezinovoy promshlennosti.  
(Rubber--Thermal properties) (Plasticizers)

83472

The Effect of Ingredients on the Resistance of Rubber to Frost During Repeated Deformations S/190/60/002/009/002/019  
B004/B060

of carbon black on  $T_{0,1}$  in the case of SKS-30 rubber. The authors arrived at the following conclusions: The effect of plasticizers is greater with polar rubbers than with nonpolar rubbers. The difference between polar and nonpolar rubbers becomes manifest in a different action of the softeners at high and low deformation frequencies on the intermolecular structure and the resistance to frost. When using carbon black or chalk as a filler, vitrification shifts toward higher temperatures. The simultaneous introduction of carbon black and plasticizer lowers the resistance to frost with rising carbon black content. The filler increases the rubber hardness and, thus, lowers the resistance to frost. A paper by V. A. Kargin and G. L. Slonimskiy is mentioned (Ref. 14). There are 7 figures, 2 tables, and 15 references: 10 Soviet, 2 British, 2 US, and 1 German. X

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: January 23, 1960

Card 3/3

83472

The Effect of Ingredients on the Resistance of  
Rubber to Frost During Repeated Deformations

S/190/60/002/009/002/019  
B004/B060

+20°C with  $\omega = 0.1, 1, 10, 100, \text{ and } 1000 \text{ cycles/min.}$  The rubber samples were masticated with dibutyl phthalate (DBP), dioctyl sebacinate (DOS), tricresyl phosphate (TKP), paraffin oil, or "Renatsit", and vulcanized with 2% of sulfur. Carbon black or chalk was used as a filler. The variation of the coefficient  $k$  of resistance to frost was examined at the five frequencies specified, and from the curves obtained the authors determined the temperature  $T_{0,1}$  and  $T_{0,6}$ , at which deformation amounted to 10 or 60% of the deformation at 20°C, respectively ( $k = 0.1$  or  $k = 0.6$ ). As is shown by Fig. 1, deformation in MVPK is a linear function of the softener content. Table 1 supplies data of  $T_{0,1}$  for DBP, Table 2 for DOS. Fig. 2 shows the approximately linear function  $\log \omega = f(1/T)$ . Thence, the authors calculated the value  $U_0$ , which had been defined in an earlier paper (Ref. 15) and which is a function of the activation energy. As is illustrated in Fig. 3, this value drops with rising softener content. Fig. 4 shows  $U_0$  as a function of  $T_{0,6}$ . Fig. 5 shows the effect of an addition of carbon black (up to 50% by weight), Fig. 6 that of chalk (up to 150% by weight) on deformation, and Fig. 7 the effect of 30% by weight

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83472

S/190/60/002/009/002/019  
B004/B060

15.9300 also 2104, 2209

AUTHORS: Zaytseva, V. D., Bartenev, G. M.TITLE: The Effect of Ingredients on the Resistance of Rubber  
to Frost During Repeated Deformations <sup>1</sup>PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 9,  
pp. 1301-1308

TEXT: In the introduction, the authors discuss the publications dealing with the resistance of rubber to frost along with the action of plasticizers, and mention papers by S. N. Zhurkov (Ref. 1), V. A. Kargin and Yu. M. Malinskiy (Ref. 2), A. P. Aleksandrov and Yu. S. Lazurkin (Ref. 11). They state that vitrification had so far not been studied thoroughly under dynamic conditions, and then report on their experiments. The apparatus designed by Aleksandrov and Gayev at the Institut rezinovoy promyshlennosti (Institute of the Rubber Industry) was used for the purpose. Samples of <sup>1</sup> butadiene styrene rubber CKC-30 (SKS-30), butadiene nitrile rubber/5 CKM-40 (SKN-40), and pyridine rubber MBTK(MVPK) were rhythmically subjected to a stress of 1.8 kg/cm<sup>2</sup> in a temperature range between -100 and

Card 1/3



SCA/371

Geomethebanlye po lyundnostesestii, Bzh, 1953

Method: Instrumentation analysis; especially semi-automatic (Method for Luminescence Analysis); Materials of the 9th Conference; Kirov, 1960. AS USSR, 1960. 147 p. 1,500 copies printed.

Sponsoring Agency: Akademiya Nauk Belorusskoy SSR. Institute Field

General Ed:  
M. Biderko-

**PROJECT:** This collection of articles is intended for biologists and life scientists interested in molecular immunoreaction and for scientists in general concerned with applications of this and related phenomena in research in the life sciences.

[illegible]

Pudilevich, M. M. Landweinstein Method and Device for the Analysis of Water-Oil Emulsions

Pavlovsk, A. B., L. Ye. Gerasimov, K. D. Litvinov, and  
M. I. Potemkin, eds. [Izdat. Kievskogo zarada "Kievskiy  
Rechnichesk", Kievskiy universitet (with of the Kiev  
Plant "Ruskiy Rechnichesk", Kiev University)].

## Thermogravimetric Analysis of Rubber

Person, R. L. (Frankensteinly named) - Isolated, previously  
instituted, and previously named (Frankenstein Scientific  
Research Institute of the Cable Industry). Investigation  
tion by the Frankenstein Method of the Diffusion of  
Liquids in Rubbers

Proprietor, V. R., and V. D. Systems, Inc.,  
Industrially Induced, 10000 N. 1st St.,  
Scientific Research Institute of Rubber and Latex Products,  
Landscape Properties of Ingredients and Rubbers Made From  
Natural Rubber

BRUSIL, I. E., N. I. K. REYBET, and A. V. GILBERT.  
[Institute of Biological Physics, Soviet Academy of  
Biological Physics AS USSR]. Luminescent Microscopy  
of Living Organism

Angelika V. Kh. [Khabarovsk Gosudarstvennyy Meditsinskii Institut (Khabarovsk State Medical Institute)].  
Luminescence Microscopic Analysis of Skin Cancer

Immunology, A. P., and E. W. Ischerbach-Ilinski. Study by the Immunofluorescence Microscopy Method of the Morphology of Certain Sporogenous and Asporogenous Bacteria

**Bykhovskaya, N. T.** [Institute pleniyaya Akad. SSSR (Institute of Nutrition of the Academy of Medical Sciences of the USSR)].  
Experimental Use of Luminescence Microscopy in Microbiology

On the Suppression of the Catalytic Effect of  
Polyvalent Metals in Rubbers

SOV/20-125-5-29/61

complex salts with the ions  $\text{Cu}^{++}$ ,  $\text{Fe}^{+++}$ , etc have a greater stability with respect to the salts of polyvalent metals than the rubbers used for their production. There are 3 figures, 2 tables, and 6 references, 1 of which is Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy (Scientific Research Institute for Rubber- and Latex-Products)

PRESENTED: January 3, 1959, by P. A. Rebinder, Academician

SUBMITTED: December 22, 1958

Card 4/4

On the Suppression of the Catalytic Effect of  
Polyvalent Metals in Rubbers

304/26-125-5-22/61

compounds of iron and rubber with certain components of rubber form stable complex compounds, which may be obtained by the precipitation of acid or basic aqueous solutions from them. The components which had not participated in the reaction must then be carefully washed out. The composition of these compounds is shown by a table. The relations of the molecules of organic compounds to the metal atoms, as shown in these tables, can in most cases not be represented in form of a definite structure, and therefore this problem is in need of further investigation. The reaction between the complex-former and the metal in the rubber medium develops completely but slowly. 3 diagrams contain data concerning the kinetic oxidation of rubber in the presence of complex compounds (formed immediately in the carboniferous medium of the rubber), and also concerning the synthesized complex compounds introduced into a rubber. The bound metal ions exercise no influence whatever upon the rate of oxidation or upon the structural variation of rubber, i.e. they lose their catalytic activity. Therefore, rubbers able to form

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On the Suppression of the Catalytic Effect of  
Polyvalent Metals in Rubbers

334/26-125-5-29/61

d-layer of the  $\text{Cu}^{++}$ -ion or by 5 electrons of  $\text{Fe}^{+++}$  and  $\text{Mn}^{++}$  not joined in pairs) show a complete blocking of the central ion by the molecules of the addend, so that transition of the electrons from this ion to the substratum (peroxide of rubber) or vice versa becomes impossible. The first part of the present paper deals with the ability of metal salts to form complex compounds with the various ingredients of rubber mixtures, viz. in low-molecular compounds and in the rubber substance. The binding of the copper ion by the antioxidant in the benzene solution was investigated by observing the fluorescence of the solution of these substances in benzene and alcohol. The conditions warranting the complete extinction of fluorescence are given by a table. As the extinction of fluorescence may be brought into connection with the blocking of the ion, it indicates a decrease of the possibility of a valence transition and consequently a decrease of the catalytic activity of the metal ion. The authors then investigated the possibility of the formation of the aforementioned complex compounds in the rubber substances. The

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SCV/20-125-5-29/61

5(4)  
 AUTHORS: Kuz'minskiy, A. S., Zaytseva, V. D., Lezhnev, N. N.

TITLE: On the Suppression of the Catalytic Effect of Polyvalent Metals in Rubbers (O podavlenii kataliticheskogo deystviya polivalentnykh metallov v kauchukakh)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1057 - 1060 (USSR)

ABSTRACT: The suppression of the catalytic effect of polyvalent metal ions contained in rubbers is an important, though hitherto little investigated problem. This gap is partly filled by the present paper. The behavior of metal salts was investigated in divinyl-styrene rubber as well as in natural rubber. The authors determine the rate at which oxygen is absorbed by rubber at various temperatures and the variation of rubber structure from the viscosity of its solution in benzene. The results obtained by these investigations are shown by 3 diagrams. It was found useful to investigate the binding of metal ions to stable, catalytically inactive complexes. These complexes (which are apparently formed by an electron of the

Card 1/4

BARTENEV, G.M.; ZAYTSEVA, V.D.

Mechanical vitrification and the activation energy of rubberlike  
polymers. Vysokom. soed. 1 no.9:1309-1318 S '59.  
(MIRA 13:3)

1.Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.  
(Rubber) (Polymers)

ZAYTSEVA, V.D.

MIKHLIN, B.D.; MEL'NIKOVA, G.K.; ZAYTSEVA, V.D.; NIKITINA, S.A.; GRITSMAN, Yu.Ye.; GORBOVITSKIY, Ye.B.; KRYUCHKOVA, G.S.; KONDRAT'YEVA, N.I.

Effect of rubber on drugs and the body. Report No.1: Present-day views on the subject. Med.prom. 12 no.2:35-41 F '58. (MIRA 11:3)

1. Nauchno-issledovatel'skiy institut reziny i Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i oborudovaniya.

(RUBBER--PHYSIOLOGICAL EFFECT) (DRUG INDUSTRY)

MIKHILIN, B.D., MHL'NIKOVA, G.K., ZAYTSEVA, V.D., NIKITINA, S.A., GRITSMAN,  
Yu.Ya., GORBOVITSKIY, Ye.B., KRYUCHKOVA, G.S., KONDRAT'YEVA, N.I.

Effect of vulcanized rubber on drugs and the body. Report No.2.  
Med.prom. 12 no.8:8-12 Ag '58 (MIRA 11:9)

1. Nauchno-issledovatel'skiy institut reziny i Nauchno-issledovatel'skiy  
institut eksperimental'noy khirurgicheskoy apparatury i instrumentov.  
(RUBBER--PHYSIOLOGICAL EFFECT)



S/081/55/000/019/012/012  
A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 19, p. 547. # 79529

AUTHORS: Zaytseva, V. D., Drozdova, L. V.

TITLE: The Application of Amperometrical Titration in Rubber Industry

PERIODICAL: V sb.: Metody analiza syr'ya i materialov, primenyayemykh v resin.  
prom-sti Moscow, 1959, pp. 144-148

TEXT: The method of amperometrical titration was applied for the quantitative determination of Mg and Ca. Mg was determined by the method of an increasing wave; ammonium solution of hydroxyquinoline was used as a titrated solution; titration was performed in  $\text{NaCOOCH}_3$  medium at a pH value of 9 - 12. Ca was determined by the method of a decreasing wave in the presence of a principal ion. Titration was performed in a neutral  $\text{KNO}_3$  medium; solution of  $\text{NH}_4$  oxalate was used as a titrated solution; the Cd ion in the form of nitrite was used as a principal ion. The method permits the accurate determination of the completed titration process independent of the color of the solution investigated.

O. Belyatskaya

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

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1. ~~Atommashinnoye soveshchaniya po spektroskopii, 1956.~~  
2. ~~III Atommashinnoye soveshchaniya (Materialy of the 10th All-Union~~  
3. ~~Conference on Spectroscopy, 1956. Vol. 2: Atomic Spectroscopy)~~  
4. ~~Uchebnyy kurs fiziki yadernykh reaktiv, 1958. 563 p. (Series: Fiz.~~  
5. ~~Yadernykh reaktivov. Izdat. Leningradskogo univ., 1958. 3,000 copies printed.~~

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po  
spektrskopii.

**Academician** **Member:** G. G. Landenburg, Academician, (Resp. Ed.);  
S. N. Repovost, Doctor of Physical and Mathematical Sciences;  
L. A. Fabelinskiy, Doctor of Physical and Mathematical Sciences;  
V. A. Fabrikant, Doctor of Physical and Mathematical Sciences;  
V. A. Gerasimov, Doctor of Physical and Mathematical Sciences;  
S. M. Rayevskiy, Doctor of Physical and Mathematical Sciences;  
S. V. Shchegolev, Doctor of Physical and Mathematical Sciences;  
Candidate of Physical and Mathematical Sciences: A. S. Milyanuk  
(deceased), Doctor of Physical and Mathematical Sciences; A. A.  
Gerasimov, Doctor of Physical and Mathematical Sciences; A. A.  
Kuznetsov, Doctor of Physical and Mathematical Sciences;  
S. V. Shchegolev, Doctor of Physical and Mathematical Sciences.

**Ed.: S.L. Gaser; Tech. Ed.: I.V. Sazonovsk.**  
**PURPOSE:** This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

**CONTENTS:** This volume contains 177 scientific and technical studies of atomic spectroscopy presented at the 1964 International Conference on Spectroscopy in Leningrad. The studies were carried out by scientists from 25 countries and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling plasma production, physics and technology of gaseous vapors, optics and spectroscopy, anomalous dispersion, spectrum analysis of stars, spectroscopy, photophysical methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of steels by means of isotopes, tables, and analysis of spectral lines, spark spectroscopic analysis of statistical spectral lines, variation in the parameters of variation curves, determination of trace elements by atomic absorption, analysis of the spectra of stars, the spectra of galaxies, and principles and methods of physicochemical analysis.

Case 2/37

Materials of the 10th All-Union Conference (Cont.)	307/1700
Babat, A.M. Consideration of the Effect of Tertiary Components in the Analysis of Copper-Base Alloys	435
Kochergina, T.Ya., and I.A. Zaytseva. Spectral Determination of Cu, Sn, Sb, Bi, and Ag in Lead Antimonide	438
Mudrova, Ye.P. Spectrographic Determination of the Relation- ship Between Phosphorus and Arsenic Distribution in Steel	439
Palmer, R.L. Experience in Spectrum Analysis Using Piled Curves in the Production of Normal Electrolytic Corundum	441
Petrov'yev, A.N. Spectrum Analysis of Aluminum and Glass	446
Kustanovich, I.M. Spectrograph for the Analysis of Molten Metal and Slag	451
Kustanovich, I.M. Simple Photoelectric Units for Emission Spectrum Analysis Utilizing the Total Intensity of Many Lines	452
Card 25/31	

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100007-6

KOCHUBKOVA, T.Ya.; ZAYTSOVA, V.A.

Spectral determination of Cu, Sn, Sb, Bi, and Ag in antimonial  
lead. Fiz.sbor. no.4:438-439 '58. (MIRA 12:5)  
(Lead--Spectra)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100007-6

ZAYTSEVA, V.A.; MOISEYEVSKIY, V.I.

Valve dischargers. Pat. prod. na gor. elektrotransp. no. 57-58 '64. (MIRA 18:2)

1. Energosluzhba Tramvayno-trolleybusnogo upravleniya Sverdlovsk.

KOROTKOVA, V.S., inzh.; ZAYTSEVA, V.A., starshiy tekhnik

Methods of evaluating the printing properties of paper.  
Bum.prom. 35 no.3:13-15 Mr '60. (MIRA 13:6)

1. Kontrol'no-tekhnicheskaya laboratoriya Moskovskoy tipografii  
"Gosznak".  
(Paper) (Printing)

FEORILAKTOV, V.; ZAYTSEVA, V.

"The Action of Diazobenzene on Alkyl Acetylacetic Esters as a Means of  
Obtaining the Phenylhydrazones of Ketonic and Amino Acids" Part III  
"The Synthesis of Alanine", Zhur. Obshch. Khim. 10, No. 3, 1940. Laboratory of  
Albumen, Academy of Sciences USSR. Received 29 August 1939.

Report U-1526, 24 Oct 52

ZADITZEVA, V.

V. V. FEOFILAKTOV, ZhOKh, 1940, 10, 247-254, 255-259

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100007-6

ZAKHAROVA, V.

V. V. KLOPILANOV, ZhOFM, 1940, 10, 277-284, 280-281



*ZAITSOVA, V.*

ZAITSOVA, V.

V.V. PROFILAKTOV, ZhOKh, 10, 258-9, 1940

ZAYTSEVA, V.

Zaytseva, V. - "Pliocene fauna near the village of Izy in the Carpathian oblast,"  
Nauch. raboty studentov (L'vovsk. gos. un-t im. Franko), Symposium 1, 1949, p. 71-82,  
Bibliog: 9 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

ZAYTSEVA, V., FEOFILAKHOV, V.

"The Action of Diazobenzene on Alkyl Acetylacetic Esters as a Means of Obtaining the Phenylhydrazones of Ketonic and Amino Acids" Part III. "The Synthesis of Allanine," Zhur. Obshch. Khim, 10, No. 3, 1940. Laboratory of Albumen, Academy of Sciences USSR. Received 29 August 1939.

Report U-1526, 24 Oct 52

ZAYTSEVA, V.

British law courts' practice on export licenses. Vnesh. torg. 27 no.9:  
46-48 '57. (MIRA 10:9)

(Great Britain--Commercial law)

GAMOVA, Anna Samuilovna; NUZHDINA, Margarita Vyacheslavovna; KACHKO, L.I.,  
retsensent; KOGAN, A.B., nauchnyy red.; ~~ZAYTSEVA, T.M., red.~~;  
MEDVEDEV, L.Ya., tekhn.red.

[Chemical finishing of footwear] Khimicheskaya otdelka obuvi.  
Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po legkoi promyshl.,  
1958. 199 p. (MIRA 12:2)  
(Shoe manufacture)

ZAYTSEVA, T.M.

DERYUGIN, Sergey Matveyevich; KISELEV, M.A., retsentsent; ZAYTSEVA, T.M., red.;  
KOGAN, V.V., tekhn.red.

[Operation and maintenance of spinning machinery; comb spinning of  
thin wool] Ustroistvo i obeluzhivanie priadil'nykh mashin;  
grebennoe prisdanie tonkoi shertsai. Moskva, Gos.nauchno-tekhn.  
izd-vo lit-ry po legkoi promyshl., 1957. 150 p. (MIRA 11:1)  
(Spinning machinery)

29-775110371  
PAVLOVA, Mariya Ivanovna; ZHUPIKOVA, Dar'ya Maksimovna; KARPOV, Yakov  
Alekseyevich; BYKOV, A.P., retsenzent; ZAYTSEVA, T.M., red.;  
KOGAN, V.V., tekhn.red.

[Four-shuttle British-Northrop loom] Chetyrekhchelnochnyi tkatskii  
stanok British-Nortrop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry  
po legkoi promyshl., 1957. 182 p. (MIRA 11:3)  
(Looms)

KUCHERSKAYA, P.R.; BORISOVA, T.I.; MITYUSHIN, I.I.; IVANCHENKO, P.M., red.;  
ZAITSEVA, T.M., red.; KOGAN, V.V., tekhn.red.

[Efficient methods of manufacturing blown stemware] Ratsional'nye  
sposoby vyrabotki stekliannykh vyduvnykh izdelii na noshke. Moskva,  
Gos. nauchno-tekhn.izd-vo M-va tekstil'noi promyshl. SSSR, 1957.  
51 p. (MIRA 12:3)

1. Russia (1923- U.S.S.R.) Ministerstvo legkoy promyshlennosti.  
Tekhnicheskoye upravleniye. Byuro tekhnicheskoy informatsii.
2. Sotrudnik Vsesoyuznogo nauchno-issledovatel'skogo instituta  
steklovolokna Ministerstva legkoy promyshlennosti SSSR (for  
Kucherskaya, Borisova, Mityushin).  
(Glass blowing and working)



KARASIN, Z.B.; YEMERSKIY, G.Ye., red.; ZAYTSEVA, T.M., red.; KOGAN, V.V.,  
tekhn.red.

[Summer footwear manufactured from new materials; "Zaria svobody"  
shoe factory] Letniaya obuv' iz novykh materialov; obuvnaya  
fabrika "Zaria svobody". Moskva, Gos.nauchno-tekhn.izd-vo M-va  
legkoi promyshl. SSSR, 1957. 25 p. (MIRA 12:11)

1. Russia (1923- U.S.S.R.) Ministerstvo legkoy promyshlennosti.  
Tekhnicheskoye upravleniye. Byuro tekhnicheskoy informatsii.  
(Moscow--Shoe manufacture) (Synthetic fabrics)

VAYSBERG, Isaak Yefimovich, kand.tekhn.nauk; MASINIKOV, Ye.I., retsenzent;  
ZAYTSEVA, T.M., red.; PLEMYANNIKOV, M.N., red.; MEDVEDEV, L.Ya.,  
tekhn.red.

[Sole leather manufacture] Proizvodstvo kozhi dlia niza obuvi.  
Moskva, Gos.nauchno-tekh.izd-vo lit-ry po legkoi promyshl., 1959.  
192 p. (MIRA 13:4)

(Leather)

ZAYTSEVA, T.Kh.; CHERNYSHEVA, L.N.; SHAKHNAZAROVA, M.V. (Simferopol')

Results of the clinical study of "sinkumar." Vrach, delo no. 11  
119-121 Ja '63. (MIRA 164)

1. Kafedra diagnostiki vnutrennikh bolezney (zav. -- prof. B.A.  
Shakhnazarov) i gosital'noy terapii (zav. -- prof. P.A. Tepper)  
Krymskogo meditsinskogo instituta,  
(ANTICOAGULANTS (MEDICINE)-PHYSIOLOGICAL EFFECT)

ZAITSEVA, T.Kh., kandidat meditsinskikh nauk (Simferopol')

Role of the central nervous system in the regulation of cholesterolin metabolism. Vrach. delo no.1:33-35 Ja '57 (MLRA 10:4)

1. Kafedra diagnostiki i chastnoy patologii s terapiyey vnutrennikh bolezney Krymskogo meditsinskogo instituta.  
(CHOLESTEROL) (NERVOUS SYSTEM)

SHAIKHMAZAROV, A.B., prof.; TROITSKIY, G.V., prof.; TARASOVA, L.S., dots.;  
ZAYTSEVA, T.B., kand.med. nauk (Simferopol')

Blood protein fractions in atherosclerosis. Vrach.delo no.1:87 '59.  
(MIRA 12:4)

1. Kafedra diagnostiki vnutrennikh bolezney (zav. - prof. A.B. Sha-  
khnazarov) i kafedra biokhimii (zav. - prof. G.V. Troitskiy) Krym-  
skogo meditsinskogo instituta.  
(BLOOD PROTEINS) (ATHEROSCLEROSIS)

ZAYTSEVA, T. I.

"The Excretory Function of the Stomach and the Effect the Cerebral Cortex Has on It." Cand Med Sci, L'vov Medical Inst, L'vov, 1953. (RzhBiol, No 4, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

ZAYTSOVA, T.I.

Influence of the cerebral cortex upon the excretory function of the stomach.  
Medych.zhur. 22 no.5:30-38 '52. (MIRA 6:10)

1. L'vivs'kyy medychnyy instytut. (Brain) (Stomach)

ZAYTSEVA, T.I.

Effect of conditioned reflex irritation and inhibition on excretory  
function of the stomach. Vopr.fiziol. no.8:106-115 '54.

(MIRA 14:1)

1. L'vovskiy meditsinskiy institut.

(REFLEX, CONDITIONED,

eff. of conditioned irritation and  
inhib. on gastric excretory funct.  
in dogs)

(GASTRIC JUICE,

secretion, eff. of conditioned irritation  
and inhib. in dogs)



ZAY TSEVA, T.G.

(X7) PAPER I BOOK EXPLANATION 80W/2347

Lesnigrad, Glavaya geofizicheskaya observatoriya  
Voprosy dinamicheskoy meteorologii (Problems in Dynamic Meteorology)  
Lesnigrad, Gidrometeoizdat, 1959. 91 p. (Series: Its Trudy, vyp. 81)  
Errata slip inserted. 1,200 copies printed.

Sponsoring Agency: Glavnye upravleniye gidrometeorologicheskoy sluzhby  
pri Sovetskom Ministre SSSR.

Ed. (title page): M.I. Tulin, Doctor of Physical and Mathematical Sciences  
and M.Ye. Shvets, Doctor of Physical and Mathematical Sciences, Ed.  
(inside book): L.P. Zhukovskiy, Tech. Ed.: O.G. Vladimirov.

PURPOSE: This issue of the Geophysical Institute's Transactions is intended for  
scientific workers and specialists in dynamic and synoptic meteorology.

COVERAGE: This collection of articles treats problems in dynamic meteorology,  
the vertical motion, and discusses various methods of forecasting  
meteorological elements. Closely related to this is a study aimed at determining  
vertical velocities according to aircraft vibration data. 10 personalities  
are mentioned. References accompany each article.

Tulin, M.I., N.I. Yakovlev, L.V. Butkovets, L.S. Orlov, and P.A. Sol'tser.  
The Problem of Cyclone Evolution 20

Pravitskaya, I.F., and M.A. Kozlovskaya. Results of Advance Computation  
of the Displacement of Near Surface Cyclone Centers 34

Dobor, A.S., T.G. Zayeva, and E.S. Bakova. Comparative Analysis of  
Some of the Simplest Methods of Numerical Forecasting 46

Gandhi, I.B., and T. Dolid. Methods for Integrating the Vorticity Equation  
Along an Isobaric Surface 53

Pravitskaya, I.F., and T.G. Zayeva. The Problem of Stabilizing the Smoothed-out  
Currents Used in Geopotential Forecasting Methods 58

Pravitskaya, I.F. Formulas for Advance Computation of Upper-Air Baric  
Center Displacements 64

Dobor, A.S. The Problem of Determining Vertical Wind Velocities from  
Aircraft Accelerograph Data 73

Zayeva, M.Y. Determining the Critical Values of Richardson's  
Number as an Index Criterion of Increased Atmospheric Turbulence 85

ZAYTSEVA, T.G.

Work of the nurses council. Zdrav.Belor. 5 no.7:56-57  
J1 '59. (MIRA 12:9)

1. Predsedatel' soveta medsester 2-y klinicheskoy bol'nitsy  
g.Minska.

(NURSES AND NURSING)

KLIMOVA, I.G.; ZAYTSEVA, T.F.

Zonal differentiation of Kimmeridgian sediments in the West  
Siberian Plain. Dokl. AN SSSR 165 no.4:898-900 D '65.  
(MIRA 18:12)

1. Sibirskiy nauchno-issledovatel'skiy institut geologii,  
geofiziki i mineral'nogo syr'ya. Submitted May 22, 1965.

KLIMOVA, I.G.; ZAYTSEVA, T.F.

First finds of ammonites Speetoniceras in Western Siberia. Trudy  
SNIIGGIMS no.23:108-113 '62. (MIRA 16:9)  
(West Siberian Plain--Ammonoidea)

POSPELOVA, L.A.; ZAYTSEVA, T.F.

Trivalent cerium acetate compounds. Zhur. neorg. khim. 10  
no.5:1097-1106 My '65. (MIRA 18:6)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova  
AN SSSR.

ZAYTSEVA, T. A. dotsent

Secretary and motor function of the stomach during the first  
month after resection. Khirurgiia no.10:19-22 O '54. (MIRA 8:1)

1. Iz kafedry fakul'tetskoy khirurgii (dir.-prof. A.A.Busalov)  
Yaroslavskogo meditsinskogo instituta  
(STOMACH, surgery  
resection, postop. secretory & motor funct.)

ZAYTSEVA, T.A., Doc Med Sci -- (diss) "<sup>Problems</sup>~~Questions~~ of the  
pathophysiology of <sup>the</sup> post-operative period of patients  
who have undergone ~~a~~ resection of the stomach <sup>Because of</sup> ~~for~~ ulcers."  
Yaroslavl', 1958, 27 pp. (Second Mos State Med Inst im  
N.I. Pirogov) 250 copies (KL, 39-58, 111)

IMSHENETSKIY, A.A.; PEROVA, K.Z.; ZAYTSEVA, T.A.; BELOZERSKIY, A.N.

Transmission of streptomycin resistance in staphylococci by means of desoxyribonucleic acid. Mikrobiologiya 28 no.2: 187-190 Mr-Apr '59. (MIRA 12:5)

1. Institut mikrobiologii i Institut biokhimii AN SSSR.

(STREPTOMYCIN, eff.

on Micrococcus pyogenes, transfer of resist. with desoxyribonucleic acid (Rus))

(MICROCOCCLUS PYOGENES, eff. of drugs on, streptomycin, transfer of resist. with desoxyribonucleic acid (Rus))

(DESOXYRIBONUCLEIC ACID,

on Micrococcus pyogenes, transfer of streptomycin-resist. (Rus))



BAKHCHISARAYTS'YAN, N.G.; ZAYTSEVA, T.A.

Electrochemical passivation of zinc coatings. Report No. 2.  
Trudy MKHTI no.26:146-150 '59. (MIRA 13:9)  
(Zinc) (Passivation)

ZAYTSEVA, T. A.

35561. Travma Organa Zreniya V Severnoy Osetii Po Materialam Kliniki  
Glaznykh Bolezney (1943-1948 G. G.) Trudy Sev.-Oset. Gos. Med. In-ta, Vyp.  
4, 1949, s. 182089.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

VOLODIN, A.; IVANOVA, T.; ZHITEL'EV, S.; ZAYTSEVA, T.; GATCHINSKIY, M.;  
LOTSEV, I.; PETROVA, V.; ZHUKOV, Ya.

You are in Leningrad. Mest.prom.i khud.promys. 2 no.2:5-15 F  
'61. (MIRA 14:4)

1. Glavnyy inzhener Leningradskoy fabрики po remontu i poshivu  
obuvi No 1 (for Petrova).

2. Direktor fabрики "Muzradio" (for Zhukov).

(Leningrad--Service industries)

YURKEVICH, Ivan Danilovich, prof., akademik; ZAYTSEVA, T., red.;  
SIDERKO, N., tekhn.red.

[Oak forests of the White Russian S.S.R. and their restoration]  
Dubravy Belorusskoi SSR i ikh vosstanovlenie. Izd.2., 1apr. 1  
dop. Minsk, Izd-vo Akad.nauk BSSR, 1960. 268 p.

(MIRA 14:2)

1. AN BSSR (for Yurkevich).  
(White Russia--Oak)

MATSEPURO, M.Ye., akademik, red.; ZAYTSEVA, T., red.; REZNIK, T.,  
red.

[Contribution of science to agricultural production] Nauka -  
sel'skokhoziaistvennomu proizvodstvu. Minsk, Nauka i  
tekhnika, 1964. 275 p. (MIRA 17:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhaniki  
i elektrifikatsii sel'skogo khozyaystva nechernozemnoy zony SSSR.

KULAK, Iosif Antonovich; KESAREVA, Ye.P., prof., red.; ZAYTSEVA, T.,  
red.; SIDERKO, N., tekhn. red.

[Formation of complex systems of time relations in man] Formiro-  
vanie slozhnykh sistem vremennykh svyazei u cheloveka. Minsk,  
Izd-vo Akad.nauk BSSR, 1962. 229 p. (MIRA 15:7)  
(NERVOUS SYSTEM) (REACTION TIME)

ZAYTSEVA, S. V.

Antlers

Improved method of preserving velvet-bearing antlers of maral. Kar. i zver. 6,  
No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

ZAYTSEVA, S.S.; LIPYAN, K.N.

Prophylaxis and treatment of fungous diseases in Chardzhou Province. Zdrav.Turk. 2 no.1:44-45 Ja-Y '58. (MIRA 12:6)

1. Iz Chardzhouskogo oblastnogo kozhno-venerologicheskogo dispansera (glavnyy vrach - S.S.Zaytseva).  
(CHARDZHOU PROVINCE--DERMATOMYCOSIS)



SOKOLOV, A.V.; BERGER, I.I.; GUROVICH, R.E.; KLIMENKO, M.Ya.;  
ZAYTSEVA, S.S.; MOTINA, G.L.

Method of refining synthetic ethyl alcohol. Khim.prom.  
no.5:327-330 My '62. (MIRA 15:7)  
(Ethyl alcohol)

PLAKSIN, I.N.; ZAYTSEVA, S.P.

Microautoradiographic study of the controlling action of oxygen on the adsorption and distribution of ( $^{14}\text{C}$ -containing) sodium tridecylate on certain minerals of the rare earth group. Dokl. AN SSSR 144 no.4:857-860 Je '62. (MIRA 15:5)

1. Institut gornogo dela im. A.A.Skochinskogo AN SSSR. 2. Chlen-korrespondent AN SSSR (for Plaksin).  
(Rare earths) (Tridecanoic acid) (Oxygen) (Adsorption)

PLAKSIN, I.N.; ZAYTSEVA, S.P.; MYASNIKOVA, G.A.; TYURNIKOVA, V.I.;  
KHAZHINSKAYA, G.N.; MAKARENKO, M.G., red. izd-va; VOLKOVA,  
V.V., tekhn. red.

[Use of radiactive isotopes in studying flotation] Prime-  
nenie radioaktivnykh izotopov dlia issledovaniia protsessov  
flotatsii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 97 p.  
(MIRA 16:5)

(Flotation) (Radioisotopes)

ZAYTSEVA, S.P.

Meeting of the scientific council on physical and chemical  
problems in mineral concentration and the Kola Branch of the  
USSR Academy of Sciences. TSvet. met. 38 no.6:86-87 Je '65.  
(MIRA 18:10)

PLAKSIN, I.N.; ZAYTSEVA, S.P., kand.tekhn.nauk

Relation between the simultaneous action of several collectors and  
their distribution among the particles of galena in flotation pulp.  
Trudy Inst.gor.dela 6:15-20 '60. (MIRA 14:4)

1. Chlen-korrespondent AN SSSR (for Plaksin).  
(Galena) (Flotation--Equipment and supplies)

ZAYTSEVA, S.P. (Moskva); PLAKSIN, I.N. (Moskva)

Combined action of certain sulphydril collector-reagents in  
the flotation of galenite. Izv. AN SSSR. Otd. tekhn. nauk. Mot.  
1 topl. no. 5:195-199 S-O '60. (MIRA 13:11)  
(Flotation--Equipment and supplies) (Lead ores)

S/180/60/000/02/018/028

E111/E152

Use of Radioactive and Nuclear Radiations in the  
Investigation of the Flotation Process

no appreciable effect and the fast neutrons emitted are not absorbed in the material. This procedure is simpler and safer than previously proposed (Refs 32, 33) methods. For aluminium-containing ores the authors propose the transmutation of  $Al^{27}$  into  $P^{30}$  by alpha particles from  $Po^{210}$ , the decay of the phosphorus giving high-energy positrons. This method, with suitable working curves, enables 0-100%  $Al_2O_3$  to be determined sufficiently accurately without interference from other elements, and requires a sample of 1 g or less. There are 12 figures and 42 references, of which 30 are Soviet, 11 English and 1 is German.

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SUBMITTED: December 4, 1959

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E111/E152

Use of Radioactive Isotopes and Nuclear Radiations in the  
Investigation of the Flotation Process

adhesion was strong on huebnerite and wolframite and less so on quartz, calcite and fluorite (Fig 11 gives absorption as functions of water volume). Microradiograms (Fig 12) show that tridecylamine is unevenly distributed on the huebnerite-particle surface. The authors give some examples of radioactive isotope applications. Plaksin and M.A. Goldin have proposed a pulp-density test device based on radioactive caesium. A special launder proposed by the authors has given good results in prolonged tests at the Yuzhnyy gornobogatitel'nyy kombinat (Southern Mining Beneficiation Combine). Quantitative analysis of ore dressing products could be obtained by bombardment with alpha particles to cause neutron emission. This has been applied to fluorite ores, with a special installation for bombardment (from  $\text{Po}^{210}$  on platinum foil) in which the powder enclosed in a container was placed on a table on a type SCH-3 neutron counter with the source above it. Working curves for the test elements are previously prepared. Particle size has

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action of chromates on these minerals is due to the formation on the mineral surface of very insoluble medium or basic chromates which prevent adhesion of particles to bubbles. Marked tridecylamine has been used to investigate the reaction of a cationic collecting agent with minerals. Fig 10 shows the adsorption of the reagent from aqueous solution of its acetates on huebnerite, quartz, fluorite and calcite (curves 1, 2, 3 and 4, respectively). Recoveries of huebnerite and quartzite were compared with tridecylamine absorption by them for pH of 1.5-10.0. Flotation experiments were also carried out with mixtures of minerals using marked tridecylamine (100 g/ton) at pH = 1.5. Complete separation into two products was possible, with 41-67% of the reagent absorbed by the froth product and only 1-4% by the non-froth. Experiments were made on the firmness of adhesion of cationic collecting agents on non-sulphide mineral surfaces in which 1-150 ml volumes of distilled water were used to wash tridecylamine from mineral powders:

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Investigation of the Flotation Process

detergent (mainly consisting of alkylaryl sulphonates); as the detergent feed rises more and more pyrrhotine grains have nonuniform xanthate distribution (Figs 7a and 7b give microradiographs for froth product particles for 200 and 1800 g of detergent per ton, respectively). Work with marked xanthate has shown that chromates do not displace that reagent from sulphide-mineral surfaces (Refs 26, 27) and, using Cr<sup>51</sup> the depressing action of chromate has been studied in relation to the amount added and the pH of the solution. Fig 8 shows dichromate adsorption by galenite as a function of pH; in Fig 9 the adsorption of chromate (A) and the recovery of froth fractions of galenite (curves 1, 4) and pyrite are shown as functions of potassium dichromate added (g/ton). Under acid conditions the Freundlich isotherm is followed in Fig 8; an alkaline solution adsorption stays virtually constant. In Fig 9 maximum adsorption for both minerals corresponds to minimum flotation recovery and conversely. The authors conclude that the depressive

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froth product (Fig 4). Using the microradiographic method the nonuniformity of various flotation-reagent absorptions by various minerals has been studied (Refs 10-14). With the aid of a special apparatus designed at the Institute by S.V. Bessonov (Ref 16), the influence of oxygen-content on flotation was investigated: some oxygen was found to be essential for flotation, the uniformity of reagent distribution on the froth-product particle surface rising with increasing oxygen concentration. The attachment of ethyl xanthate on some minerals, denied by some non-Soviet workers, was demonstrated using radioactive isotopes (Refs 23, 37 and 40). Investigation of these minerals (zinc blende and pyrrhotine) enabled the influence of their crystal-lattice defects on flotation to be shown. Fig 5a shows the effect of grams of pine oil per ton of mineral on recovery of pyrrhotine, and Fig 5b shows the corresponding effect on the absorption of various xanthates on the mineral. Fig 6 gives corresponding curves for addition of type DS

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photographic emulsion; "wet" microradiography, based on the physical adsorption and maturing of silver crystals on active centres in emulsion in a silver-ion containing solution (developed by Gomberg for biological and metallographic use). Experiments with  $S^{35}$ -containing mercapto reagents showed that under normal conditions there was no direct and unique relation between the average density of the collecting-agent layer on the mineral and its flotability (Fig 1). Automicroradiography gave the first experimental proof of the unevenness of the coverage of particle by collecting agent (Fig 2); this work was supplemented by measurements of the electric properties of sulphide-mineral surfaces. The donor and acceptor regions were revealed (Fig 3) by polarization in a solution of  $CuSO_4$  (or  $AgNO_3$ ) and of  $KI$  (or  $K_3[Fe(CN)_6]$ ), respectively. Microautoradiographic studies showed that reagent-distribution is uneven from particle to particle: only those particles which are slightly or not covered with reagent do not appear in the

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S/180/60/000/02/018/028

E111/E152

AUTHORS: Zaytseva, S.P., Myasnikova, G.A., Plaksin, I.N.,  
Starchik, L.P., Tyurnikova, V.I., Khazhinskaya, G.N.,  
and Shafeyev, R.Sh. (Moscow)

TITLE: Use of Radioactive Isotopes and Nuclear Radiations in  
the Investigation of the Flotation Process

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh  
nauk, Metallurgiya i toplivo, 1960, Nr 2, pp 120-132 (USSR)

ABSTRACT: This paper, which includes a survey, was presented by Plaksin at the general meeting of the Otdeleniye tekhnicheskikh nauk (Technical Sciences Division) AN SSSR (Academy of Sciences, USSR) on 27th October 1959. It points out that radioactive methods are particularly suitable for flotation research, where they have been applied by various Soviet research organisations including the Institut gornogo dela (Mining Practice Institute) AN SSSR (Acad. Sci. USSR) (Refs 1 and 2). The methods developed there are: contact microradiography, in which pulp particles are fixed on a cover glass which is then placed on photographic film; trace microradiography, in which the particles are immersed directly in

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ZAYTSEVA S. P.  
ZAYTSEVA, S. P., KHAZHINSKAYA, G. N., SHAFEYEV, R. S., PLAKSIN, I. N. (USSR)

"The Use of Radioisotopes for the Study and Control of Flotation Processes."

report presented at the Conference on Radioisotopes in Metallurgy and Solid State Physics, IAEA, Copenhagen, 6-17 Sept. 1960.

Quantitative Microautoradiography of Xanthates Layers on  
the Surface of Galenite

20-119-3-44/65

for Au 65 %) the measurement of the number of the molecular layers of xanthate on the sections of the particle surface is possible by means of a direct comparison of the blackening density on the radiographs of the galenite particles and the gold plate. Figure 1 shows the distribution curves of the blackening of the microautoradiograph (1) and of the radiographic impression of the gold plate with a monolayer coating (2) and with ethyl-xanthate which contains S<sup>35</sup>. The dosage for the case (figure 1) amounts to 100 g/to. The analysis of the curve makes possible the determination of the number of molecular layers on the sections of the microautoradiograph and the detection of the coefficients of the nonuniformity of the distribution of ethyl-xanthate on the galenite surface. The nonuniformity variation coefficient of the last mentioned coatings amounts to 168 %. The triple xanthate dose does not lead to a complete coating of the particles with the reagent, increases, however, only the nonuniformity coefficient up to 385 %. Butyl- and isoamyl xanthates are distributed nonuniformly, too, on the galenite surface.

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Quantitative Microautoradiography of Xanthates Layers  
on the Surface of Galenite

20-119-3-44/65

one for the maximum, the other for the minimum densities. The distribution curve was constructed from the results of the photometric evaluation of the microautoradiograph with normal blackening (not more than 2,0). The absolute covering density of single surface sections of the particles was detected according to the blackening density of the microautoradiographs by comparison with the blackening density of the etalon. Radioactive monolayers are the best radioactive sources for the quantitative radiography (ref 6). The authors established conditions (ref 7) under which a monomolecular adsorption layer of xanthate is formed on the surface of a small plate of chemically pure gold. A photometric analysis of the autoradiographic impression showed a complete homogeneity of the mentioned etalon. The coefficients of the backward scattering of the material on which the reagent was adsorbed were taken into account because of an absolute evaluation of the image intensity on the autoradiographs. In consequence of the very approximated values of these coefficients (for PbS 67 %, for

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AUTHORS: Plaksin, I. N., Corresponding Member, 20-119-3-44/65  
Academy of Sciences, USSR, Zaytseva, S. P.,  
and Shafeyev, R. Sh.

TITLE: Quantitative Microautoradiography of Xanthates Layers on  
the Surface of Galenite  
(Kolichestvennaya mikroavtoradiografiya sloyev  
ksantogenatov na poverkhnosti galenita)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 3,  
pp. 551-552 (USSR)

ABSTRACT: A nonuniform distribution of the flotation reagents on the  
surface of the sulfide minerals (size 43 - 500 $\mu$ ) under  
formation of poly-layers in single cases was found by means  
of the mentioned method. In the present paper the degree  
of nonuniformity of the galenite particles which have a  
size of 200-500 $\mu$  is evaluated quantitatively by flotation  
collectors by means of the same method. The layers on the  
particles were radiographed by means of contrast-micro-  
autoradiography (ref 1), according to the blackening of  
single sections of the impressions (determined by micro-  
photometer). 2 curves of density of blackening were  
constructed from the results of the photometric evaluation:

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137-1958-3-4522

Employment of Radioactive Isotopes (cont.)

the strength of the collector layer increases with increasing  $O_2$  content in the solution.

A. Sh.

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137-1958-3-4522

## Employment of Radioactive Isotopes (cont.)

layer increases continuously on the surface of Ag, Cu, and on the surface of an alloy consisting of 70 percent Au, 20 percent Ag, and 10 percent Cu. An investigation of the preliminary action of gases, shows that Au, having a lesser affinity for  $O_2$ , increases its adsorptive capacity throughout the entire time of its exposure to the action of  $O_2$ , whereas alloys of Au with Ag, and Au with Ag and Cu, react identically for a period of 20-30 min only; in the case of Cu and Ag the adsorptive capacity increases initially, but decreases rapidly thereafter. Such behavior of Ag and Cu may be explained by the peculiarities of the oxide films which form on their surface owing to the action of  $O_2$ .  $N_2$  and  $H_2$  do not affect the adsorptive capacity of Au, Ag, Cu, and their alloys. Experimental results have demonstrated that a preliminary reduction of the surface creates more favorable conditions for the subsequent treatment with  $O_2$ . An increase in the  $O_2$  content in the solution produces a further density increase in the xanthogenate layer on metals and alloys already possessing such a layer. The effect of the length of exposure to water on the density of the adsorptive layer was studied in order to determine the surface strength of the xanthogenate layer. It is shown that

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*Zaytseva, S. P.*

137-1958-3-4522

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 7 (USSR)

AUTHORS: Plaksin, I. N., Zaytseva, S. P.

TITLE: Employment of Radioactive Isotopes to Study the Influence of Gases on the Density of a Layer of Ethylxanthogenate of Potassium on the Surface of Gold, Silver, and Copper, and their Alloys (Izucheniye vliyaniya gazov na plotnost' sloya etilovogo ksantogenata kaliya na poverkhnosti zolota, serebra, medi i ikh splavov s primeneniym radioaktivnykh izotopov)

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota i VNITO tsvetn. metallurgii, 1957, Nr 26, pp 21-32

ABSTRACT: The study of the action of gases followed two courses: a) simultaneous action of a gas and the collector; b) preliminary action of a gas for varying periods of time, followed by immersion of the laminae into a solution of xanthogenate. It is established that the density of the adsorption layer on the surface of Au increases when the  $O_2$  in the solution is increased from 9 mg/l to 45 mg/l, and only within a certain range of time during which contact with the xanthogenate is maintained; after 90 min of contact, increases in density are no longer observed, while the density of the collector

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ZAYTSEVA, S. P.

PLAKSIN, I.N.; ZAYTSEVA, S.P.; STARCHIK, L.P.; TRET'YAKOV, O.V.; TYURNIKOVA,  
V.I.; SHAFEYEV, R.Sh.

Studying the reaction of reagents and minerals in flotation by the  
microautoradiographic method. Zav. lab. 23 no.3:313-316 '57.  
(MLRA 10:6)

1. Institut gornogo dela Akademii nauk SSSR.  
(Radiography) (Flotation)

Application of autoradiography in studying the distribution of reagents between the particles of minerals in the flotation pulp. (Cont.) 24-4-29/34

most of the xanthogenate,  $\text{CuFeS}_2$  absorbed less and  $\text{SiO}_2$  absorbed almost none. This non-uniform distribution can also be seen from Fig.5 which shows particles of galenite and quartz treated with a solution of ethyl xanthogenate, the dose being 50 g/t. Determination of the distribution of the reagent in the pulp by means of micro-autoradiography can yield useful additional information in investigating the beneficiation properties of ores. There are 5 figures, 2 American, 2 Russian references. (See also "Auto-radiography technique in investigating the distribution of flotation reagents at the surface of particles of sulphide minerals" by I. N. Plaksin, L. P. Starchik and V. I. Tyurikova, same journal, No.3, 1957, pp.187-189).

SUBMITTED: April 24, 1956.

AVAILABLE:

Card 2/2

AUTHORS: Zaitseva, S.P., Flaksin, I.N. and Shafeyev, R.Sh. (Moscow).  
 TITLE: Application of autoradiography in studying the distribution of reagents between the particles of minerals in the flotation pulp. (Primeneniye avtoradiografii dlya izucheniya raspredeleniye reagentov mezhdru chastitsami mineralov vo flotatsionnoy pul'pe).  
 PERIODICAL: "Izv. Ak. Nauk, Otd. Tekh. Nauk" (Bulletin of the Ac. Sc., Technical Sciences Section), 1957, No.4, pp.164-168 (USSR).  
 ABSTRACT: The aim of the investigations was to elucidate the dependence of the yield of grains of reduced silver on the content of a radio-active reagent at the surface of a particle of flotation size. First the authors produced their own emulsions in their laboratories but later they used a standard, Soviet produced, emulsion intended for recording electron radiation. Fig.1 shows a galenite particle at 250 times magnification, treated with a solution of ethyl xanthogenate (containing  $S^{35}$ ), the reagent dose was 10 g/t. Fig. 2 - same for a reagent dose of 50 g/t. Fig.3 shows five galenite particles treated with a solution of radio-active ethyl xanthogenate with a reagent of 50 g/t. These particles were subjected to a photometric analysis by comparing the light density transmitted through the mass of the particles; the results are given. Fig.4 shows pulp consisting of  $PbS$ ,  $CuFeS_2$  and  $SiO_2$ , galenite absorbed

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ILLEGIBLE



*ZAYTSEVA, S. P.*

USSR/Physical Chemistry. Surface Phenomena. Adsorption.  
Chromatography. Ion Exchange.

B-13

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22550.

Author : S. P. Zaytseva, I. M. Plaksin.

Inst : Not given

Title : Study of Reagent-Collector Combinations Influence on Their  
Adsorption by Copper, Silver and Gold, Silver and Copper Alloy.

Orig Pub : Izv. AN. USSR, Otd. Tekhn. N. 1956, No 7, 117-121.

Abstract : By methods of marked atoms the influence of twin xanthogenate (X) combinations, with diverse lengths of a hydrocarbonic chain on their adsorption on the surface of Cu, Ag and triple alloy (70% Au- 20% Ag- 10% Cu) laminae is studied. It is shown that the combination of ethyl (I) and butyl (II) produces a small increase in the total density of layers on Cu and alloy surfaces; combination of I and isoamyl (III) provokes an important increase in density. So, for instance, in the ratio I:II = 3.5:1.5 the density of the layer on alloy's surface increases by 20% in comparison with I alone and by 48% - with III alone. In addition to the joint action, a consecutive action of twin X was also examined by way of immersion of metallic

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USSR/Chemistry - Chemical technology

Card 1/1 Rub. 22 - 38/52

Authors : Flaksin, I. H., Memb. Corresp., Acad. of Sc., USSR; and Zaytseva, S. P.

Title : Effect of O, N and H on the adsorption of ethyl xanthogenate with Au, Ag, Cu and their alloys

Periodical : Dok. AN SSSR 101/4, 727-730, Apr 1, 1955

Abstract : Using pure metals - Au, Ag, Cu and their alloys - the author endeavored to determine the effect of gases (O, N, H) on the adsorption of ethyl xanthogenate with these metals. The effects of various gas contents in the solution on the adsorbability of the metals was established. Nitrogen and molecular hydrogen produced no visible effect on the adsorbability of the metals even at ordinary room temperatures. Only oxygen was found to be an active factor affecting the adsorption of flotation reagents and made it possible to determine the necessary density of the adsorption layer at lower solution concentrations. Oxygen was also found to be an excellent means of controlling the flotation process. Six USSR references (1948-1955). Graph.

Institution : Acad. of Sc., USSR, Mining Institute

Submitted : November 4, 1954

ZAYTSEVA, S. P.

Dissertation: "The Effect of Oxygen on the Flotation of Gold." Cand Tech Sci, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin, 21 Jun 54. (Vechernyaya Moskva, Moscow, 11 Jun 54)

SO: SUM 318, 23 Dec 1954

SVESHNIKOVA, V.N.; ZAYTSEVA, S.N.

Aluminophosphates as polyelectrolytes. Zhur. neorg. khim.  
9 no.5:1232-1236 My '64. (MIRA 17:9)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.  
Kurnakova AN SSSR.

ACCESSION NR: AP4036971

$H_3Al(PO_4)_2$  concentration is in the 0.4-0.8 molar range. The higher the aluminophosphate concentration the greater is the temperature coefficient of its relative viscosity. The specific conductance curve for  $H_3Al(PO_4)_2$  is also characteristic for polyelectrolytes, increasing strongly with dilution. The viscosity of aluminophosphate solutions is characteristic of that for polymers, increasing with increasing the rate of shear. Orig. art. has: 7 figures and 5 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova, Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 00

DATE ACQ: 05Jun64

ENCL: 00

SUB CODE: GC, IC

NO REF SOV: 001

OTHER: 007

Card 2/2

ACCESSION NR: AP4036971

S/0078/64/009/005/1232/1236

AUTHOR: Sveshnikova, V. N.; Zaytseva, S. N.

TITLE: Alumophosphates as polyelectrolytes

SOURCE: Neorganicheskoy khimii, v. 9, no. 5, 1964, 1232-1236

TOPIC TAGS: alumophosphate, polyelectrolyte, reduced viscosity, specific electric conductivity, relative viscosity, viscosity, alumophosphoric acid,  $H_3Al(PO_4)_2 \cdot 3H_2O$ , viscosity temperature coefficient, shear rate

ABSTRACT: This study of the reduced viscosity and specific electric conductivity of solutions of alumophosphates showed their concentration curves are characteristic for polyelectrolyte solutions. The high viscosity of alumophosphate solutions was explained by the formation of alumophosphoric acid  $H_3Al(PO_4)_2 \cdot 3H_2O$  which can be obtained in crystalline form from highly viscous solutions. The viscosity of alumophosphate solutions rises sharply to values above 4000 centipoises as the  $Al_2O_3$  concentration exceeds 10%; the relative viscosity shows a sharp rise when the  $H_3Al(PO_4)_2$  concentration reaches 1.0-1.4 molar. The reduced viscosity-concentration curve at 25C goes through a complete minimum when the

Card 1/2

KAZARNOVSKIY, S.N., inzh.; ZAYTSEVA, S.M., inzh.

Water-emulsion paints for the rolling stock. Trudy TSNII MPS  
no.208:130-158 '61. (MIRA 14:5)  
(Railroads--Rolling stock--Painting)  
(Latex)

ZAYTSEVA, S.M., inzh.

New varnish paints for electric locomotives. Trudy TSNII MPS  
no.208:114-129 '61. (MIRA 14:5)  
(Electric locomotives--Painting)  
(Varnish and varnishing)

0



SHVARTSBERG, Ya.; KOZITSKAYA, K.P.; DERKACH, V.M.; ZAYTSEVA, S.M.

Treatment of scleroma with streptomycin. Vest. otorinolar., Moskva  
14 no.2:65-67 Mar-Apr 1952. (CLML 22:1)

1. Honored Worker in Science, Professor for Shvartsberg; Assistant for Kozitskaya; Departmental Physician for Derkach; Senior Laboratory Worker for Zaytseva. 2. Of the Clinic for Diseases of the Ear, Throat, and Nose (Director -- Honored Worker in Science Prof. Ya. A. Shvartsberg), Kiev Medical Institute.

CHUDESOV, I.D.; BORISOV, A.M.; ZAYTSEVA, S.I.; DOLGOFILOV, N.L.;  
KRAVTSOV, Yu.I.; VOLK, P.I.

[Technology of the repair of tires of motor vehicles,  
tractors and agricultural machinery] Tekhnologiya remonta  
shin avtomobilei, traktorov i sel'skokhoziaistvennykh ma-  
shin. Moskva, 1963. 200 p. (MIRA 18:5)

1. Perovo. Gosudarstvennyy vsesoyuznyy nauchno-issledova-  
tel'skiy tekhnologicheskii institut remonta i ekspluatatsii  
mashinno-traktornogo parka.

ZAYTSEVA, S.G.; SOLOUKHIN, R.I.

Ignition of an adiabatically heated gas mixture. Dokl. AN SSSR  
122 no.6:1039-1041 0. '58. (MIRA 11:12)

1. Energeticheskiy institut imeni G.M. Krzhizhanovskogo AN SSSR.  
Predstavleno akademikom V.N. Kondrat'yevym.  
(Gases) (Combustion)